

# Preliminary

## TUB121GN Polyethylene Copolymer

TUB121GN is a natural bimodal high density polyethylene copolymer designed for extrusion of potable water, natural gas, industrial and mining pipe. When blended with an approved black concentrate, the resulting formulation (“TUB121”) is listed by the Plastics Pipe Institute (PPI TR-4, as both PE 4710 and PE 100) and is certified to ANSI/NSF Standards 14 and 61.

### Typical Properties<sup>1</sup>

	Values		ASTM Method
	English Units	SI Units	
<b>Resin</b>			
Density	—	0.949 g/cc	D4883
Melt Index 190°C/5.0 kg	—	0.24 g/10 min	D1238
Melt Index 190°C/ 21.6 kg	—	8.5 g/10 min	D1238
<b>Compression Molded Sample</b>			
Tensile Strength (2 in/min)			D638
@ Yield	3,500 psi	24.1 MPa	
@ Break	4,400 psi	30.3 MPa	
Elongation (2 in/min)			D638
@ Yield	10.4 %	10.4 %	
@ Break	>600 %	>600 %	
Flexural Modulus			D790A
2% Secant	130,000 psi	900 MPa	
Hardness			D2240
Shore D	64	64	
Vicat Softening Point	259 F	126 C	D1525
Brittleness Temperature	<-180 °F	<-118 °C	D746
Environmental Stress Crack Resistance			D1693
Condition C, 100 % Igepal, F50 (hrs.)	>5,000	>5,000	
Hydrostatic Design Basis <sup>2</sup>			D2837
@ 23 C	1,600 psi	11.0 MPa	
@ 60 C	1,000 psi	6.9 MPa	
Minimum Required Strength (MRS) <sup>4</sup>	1,450 psi	10.0 MPa	ISO 9080/12162
Notch Tensile (PENT) (hrs.)	>2000	>2000	F1473
Oxidation Induction Time			D3895
@ 210 C	>20 min	>20 min	
Thermal Stability	>464 F	>240 C	D3350
Cell Classification	445574C <sup>2</sup>	445576C <sup>2</sup>	D3350
Oxidative Resistance Classification	CC3	CC3	D3350

<sup>1</sup> Typical properties will vary and are not to be used for specification purposes.

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<sup>2</sup> Blended with approved black concentrate. Contact INEOS Technical Service for a list of approved concentrates.

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Olefins & Polymers USA



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## Regulatory Information

The product and uses described herein may require global product registrations and notifications for chemical inventory listings, or for use in food contact or medical devices. For further information, call +1-800-527-5419.

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For additional information, samples, pricing and availability, please contact:

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